**Amendments to the Specification:**

Please replace the original Abstract with the following revised Abstract. A copy of the revised Abstract is also attached herewith.

-- --In complex separations, more than one entity may have the same molecular weight, to within the ability of an instrument to distinguish. Accurate mass measurements are used in light of the previously unknown regularities in retention time to determine a retention time ~~map 212~~ (N pairs of values ($t_i^B$ , $t_i^{B_{ref}}$ )) (506). The retention time map allows a reference retention time to be assigned to each entity in a separation. The reference retention times, together with accurate mass measurements, can then be used to track and to compare entities (704,708) between separations.--